

NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) WFO Jackson, Mississippi
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR June 2011
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		SIGNATURE Alan E. Gerard, Meteorologist In-Charge DATE 07/27/2011

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐ An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

The month of June was just plain hot across the Hydrologic Service Area (HSA), especially during the first week of the month. Hattiesburg had the warmest June on record while Vicksburg had the 4th warmest. Jackson, Greenville, and Greenwood had the 5th warmest on record while Meridian had the 8th warmest. Rainfall was typically scattered across the region throughout the month. Rainfall was well below normal northwest of the Natchez Trace. Southeast of the Trace, rainfall was mostly below normal; however, there were some pockets of above normal rainfall, especially along a line from Lauderdale and Newton counties to Winston and Oktibbeha counties.

The month began with a dome of upper level high pressure covering the region through the 8th. Temperatures ranged from the upper 90s to a little over a hundred degrees across most areas. Some showers and thunderstorms popped up across southern sections of the HSA through the 5th. These showers and thunderstorms resulted from a weak surface trough along the Louisiana Coast. Some hail and damaging winds were reported with many of these thunderstorms. Rainfall was generally less than 0.75 inches. Little to no rainfall occurred on the 6th. Showers and thunderstorms were more widespread over Central and South Mississippi on the 7th and 8th. Rain from 1.00 to 2.00 inches, hail, and damaging winds were reported over this period.

The upper level ridge weakened by the 9th allowing temperatures to fall into the low to middle 90s. Surface high pressure remained across the area with hot and humid conditions through the 17th. Several cold fronts pushed into North Mississippi above our HSA during this time period and stalled. Isolated to scattered showers were reported over many of the days during this period. Rainfall amounts were generally less than 0.50 inches with some isolated totals in excess of 2.00 inches. High pressure built back into the area on the 18th and the 19th allowing little or no rainfall.

From the 20th into the 21st, a closed low and upper level trough across the Upper Great Plains began pushing slowly eastward. A strong southerly flow developed ahead of this system bringing warmer and much more humid air to

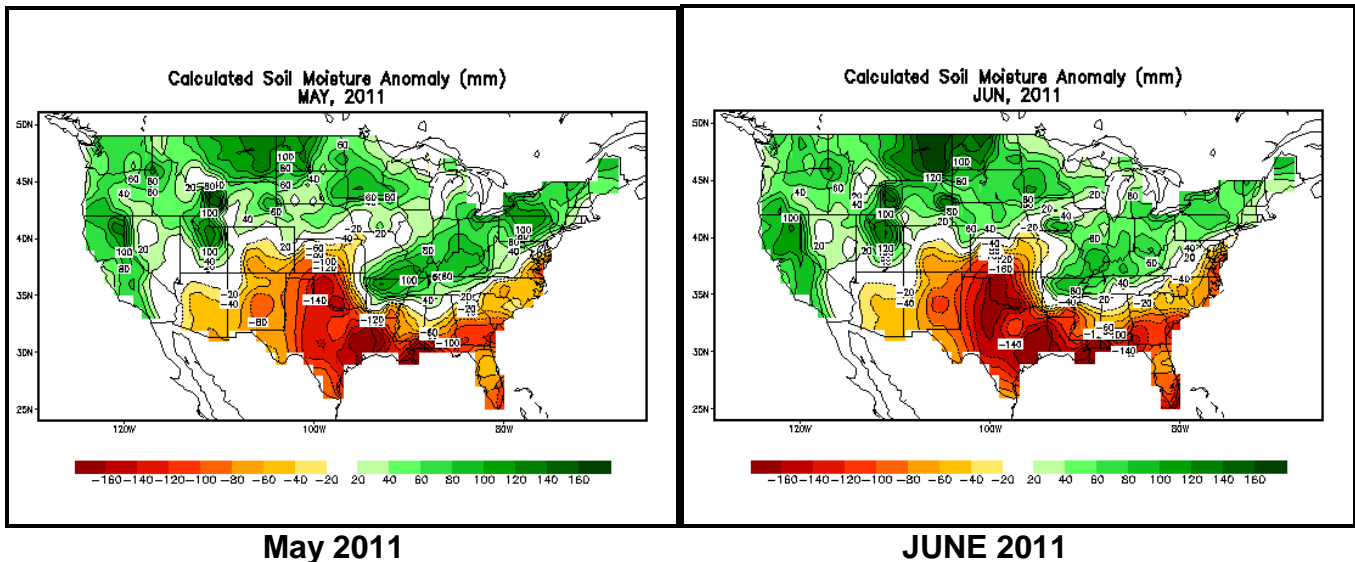
the region. From the 22nd to the 23rd, the upper system tracked northeastward dragging a cold front to North Mississippi where it stalled. The highly moist air and afternoon heating produced widespread heavy rainfall over this period. The trough moved through the southern states on the 23rd bringing an end to the rainfall, but leaving in place a very humid airmass. Rainfall totals from 1.00 to 4.00 inches occurred across much of the region.

From the 24th to 28th, an upper level ridge began to exert its influence from the west keeping all frontal activity well north of the ArkLaMiss region. A few showers ranging from 0.50 to 1.50 inches were noted in Northeast Mississippi on the 24th. No rainfall occurred on the 25th through the morning of the 28th. Showers and thunderstorms broke out in the afternoon as an outflow boundary moved south ahead of a "backdoor" cold front pushing southwest from the northeast. The cold front pushed through the area on the 29th and stalled across extreme portions of Northeast Louisiana and the Mississippi Gulf Coast. Rainfall with this system ranged from 0.25 to 1.50 inches. Rainfall was more widespread in the north while rainfall in the south was scattered. Remnants of this front remained across South Mississippi through the end of the month. Only light scattered showers and thunderstorms were noted with it.

River and Soil Conditions...

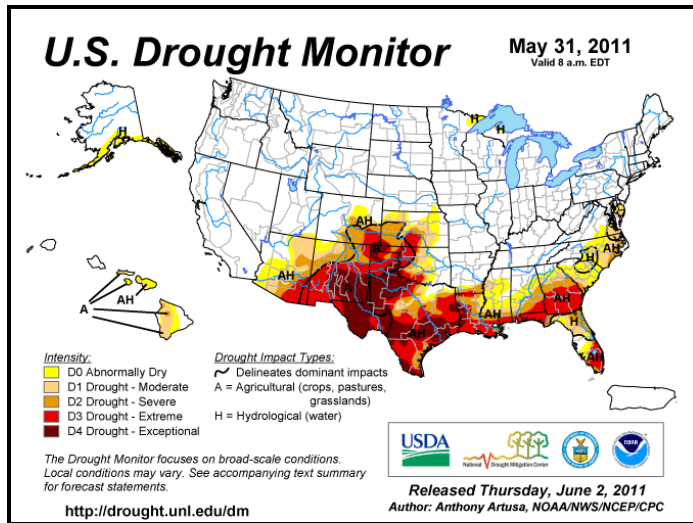
Rainfall ranged from 10 to 70 percent of the normal in areas northwest of the Natchez Trace Parkway and north of I-20. Some isolated areas had near normal rainfall. South of I-20 in Mississippi, rainfall ranged from 40 to 90 percent of the normal with scattered areas reaching up to 125 percent of the normal rainfall. South of I-20 in Northeast Louisiana, much drier conditions prevailed. Rainfall ranged from 25 to 50 percent of the normal. The region southeast of the Natchez Trace and north of I-20 had rainfall from 75 to 140 percent of the normal. Portions of Choctaw and Winston counties had from 140 to in excess of 200 percent of the normal rainfall.

The driest area in the HSA continued to be across Northeast Louisiana, Southeast Arkansas, West Mississippi, and South Mississippi where soil moisture deficits ranged from 3.00 to 4.00 inches. Soil moisture deficits across East Central and Northeast Mississippi within the HSA ranged from 1.00 to 3.00 inches.

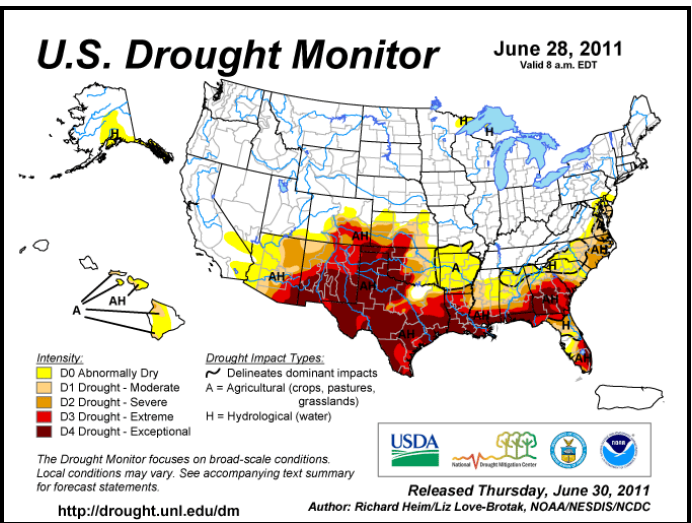


Soil Moisture anomaly (departure from normal): (25.4mm = 1 inch)

A comparison of the May 31st U.S. Drought Monitor to the June 28th U.S. Drought Monitor showed the drought worsening over extreme South Mississippi where conditions dropped from Moderate (D1) to Severe (D2) and Extreme (D3) drought. The drought worsened somewhat over Northeast Louisiana and Northeast Arkansas where conditions moved from Moderate (D1) and Severe (D2) to Severe (D2) and Extreme (D3) drought conditions. Conditions across much of the western half of Mississippi changed from Abnormally Dry (D0) to Moderate Drought (D1). East Central and Northeast Mississippi in the HSA remained classified as Abnormally Dry (D0).

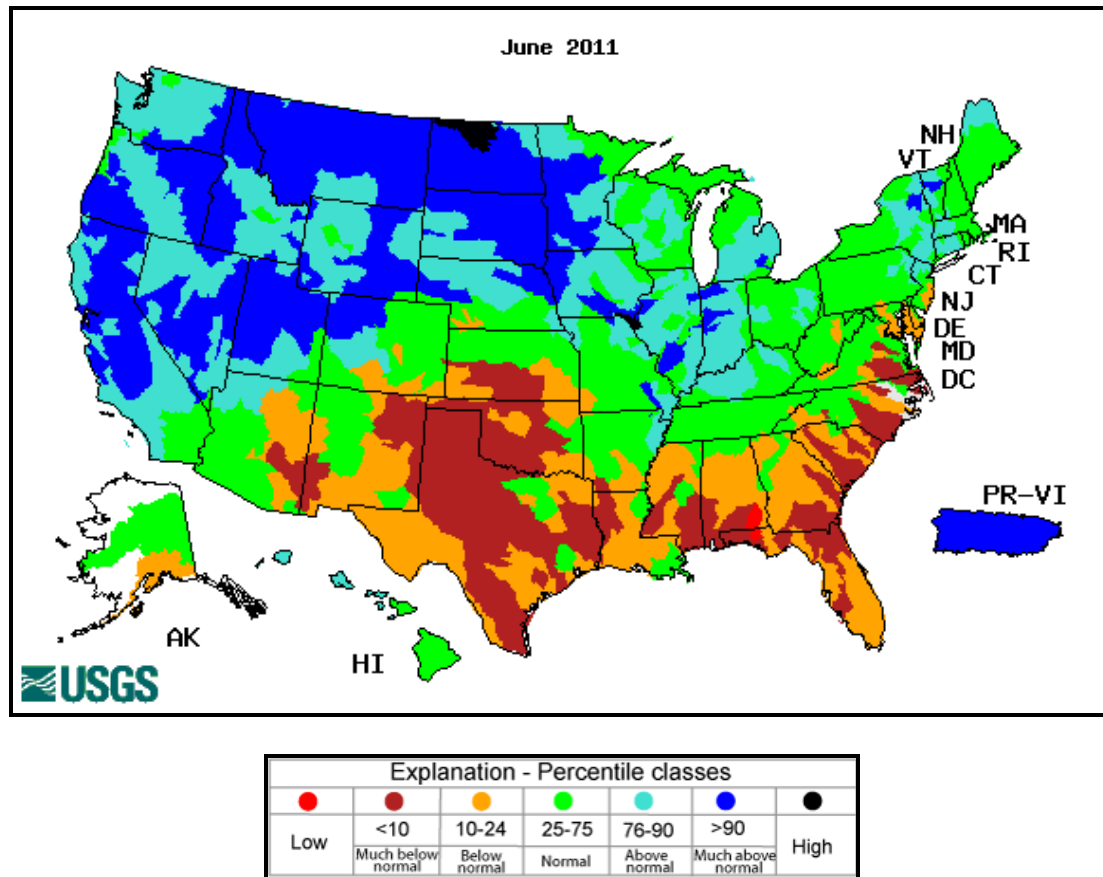


May 31, 2011



June 28, 2011

The United States Geological Survey's (USGS) June 2011 river streamflow records were compared with all historical June streamflow records. Stream flows were much below normal across the Big Black, Homochitto, and Pascagoula River Systems. The Yazoo River was below normal while the Northeast Louisiana Rivers and the Pearl River ranged from below normal to near normal.



The only flooding during the month was along the Mississippi or related to backwater from the Mississippi. All other rivers and streams remained steady for most of the month.

The Mississippi River backwater areas receded during the month. The Steele Bayou Control Structure was reopened on June 18th allowing water behind the structure to drain. The Yazoo River at Yazoo City dropped below flood on the 12th while the Mississippi River from Arkansas City to Natchez dropped below flood stage between the 11th and the 22nd.

Flood potentials are as follows:

<i>Pearl River System:</i>	Below Normal.
<i>Yazoo River System:</i>	Below Normal.
<i>Big Black River System:</i>	Below Normal.
<i>Homochitto River System:</i>	Below Normal.
<i>Pascagoula River System:</i>	Below Normal.
<i>Northeast LA and Southeast AR:</i>	Near Normal.

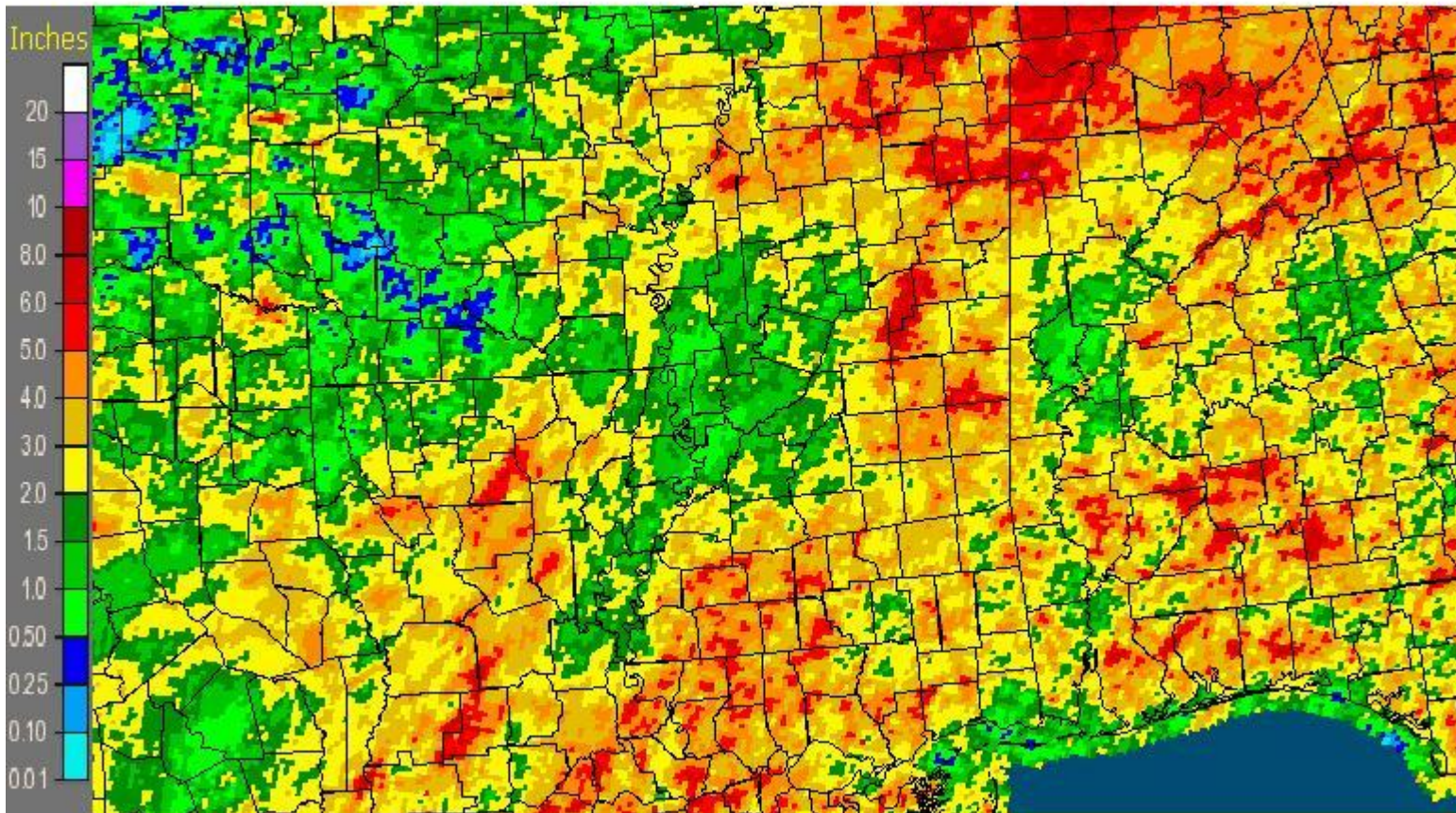
Tombigbee River System: Near Normal.
Mississippi River: Above Normal.

Rainfall for the month of June

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on May 31st until 7 am on June 30th were: 8.24 inches at Ackerman, MS; 7.90 inches at McCool, MS; 6.36 inches at Philadelphia, MS; 5.80 inches at Pat Harrison Waterway's Dry Creek Water Park, MS; and 5.34 inches at Union Church.

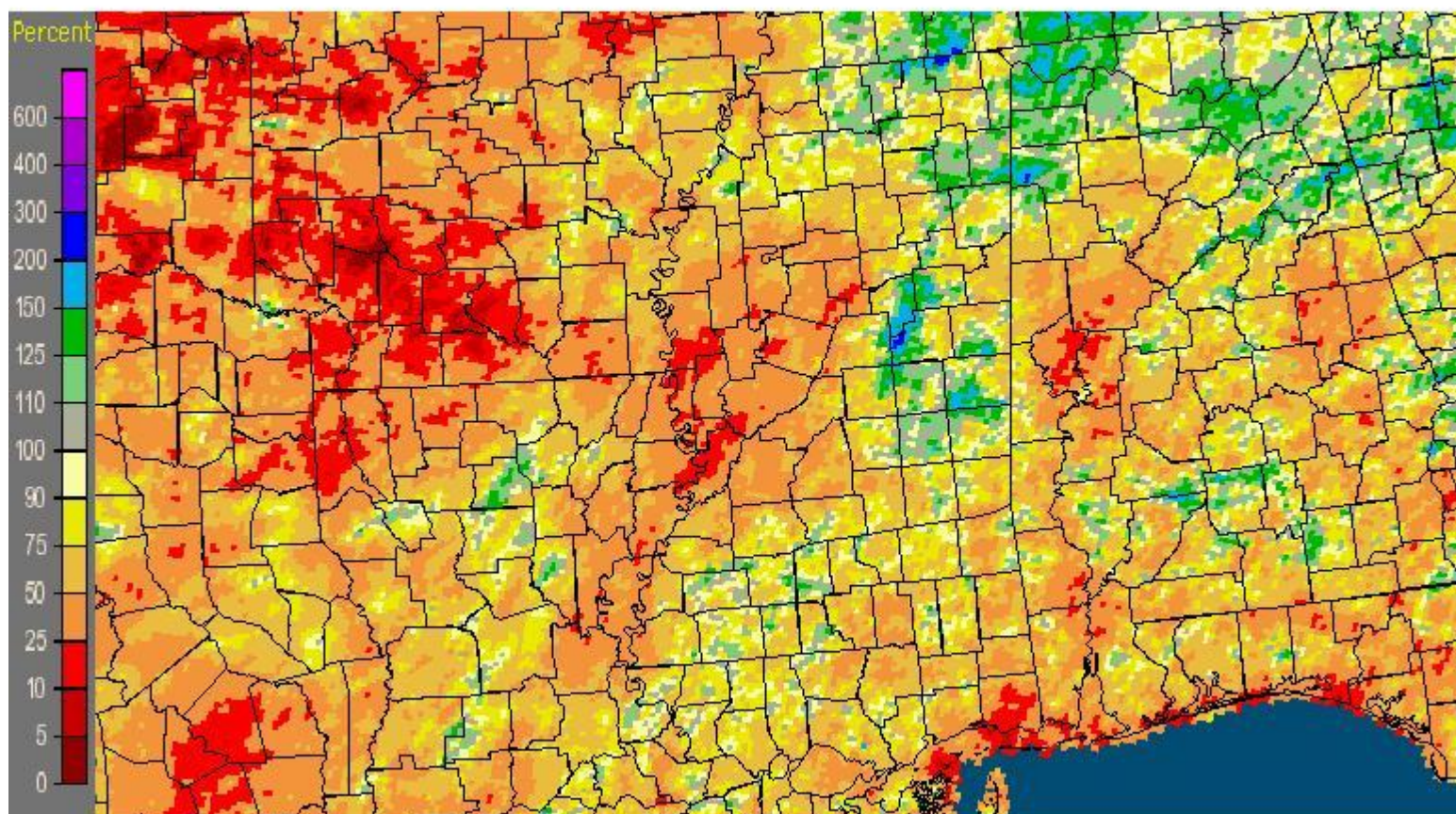
The lowest monthly rainfall totals in the HSA were: 0.47 inches at Crossett, AR; 0.69 inches at Vicksburg, MS; 0.76 inches at Satartia, MS; 0.81 inches at Greenville, MS; and 0.97 inches at Clayton, LA

Mississippi: June, 2011 Monthly Observed Precipitation
Valid at 7/1/2011 1200 UTC- Created 7/3/11 21:37 UTC



June 2011 Rainfall Estimates

Mississippi: June, 2011 Monthly Percent of Normal Precipitation
Valid at 7/1/2011 1200 UTC- Created 7/3/11 21:41 UTC



2011 June Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

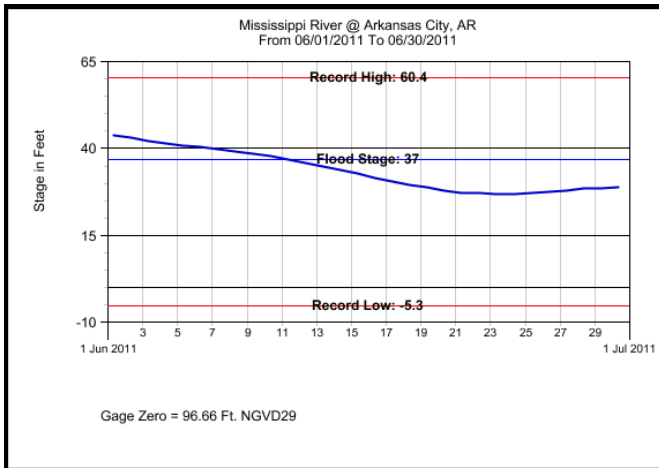
June rainfall for Selected Cities...

City (Airport)	June Rainfall	Departure from normal	2011 Rainfall	2011 Departure from Normal
Jackson, MS	1.47	-2.35	21.48	-9.10
Meridian, MS	3.75	-0.24	25.75	-6.93
Greenwood, MS	2.50	-2.00	17.73	-13.02
Greenville, MS	0.81	-3.71	14.00	-17.08
Hattiesburg, MS	4.11	-0.23	30.12	-7.84
Vicksburg, MS	0.93	-3.71	19.59	-13.86

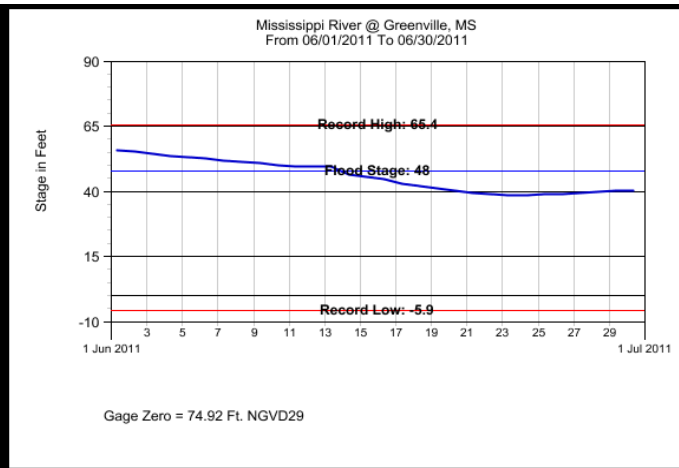
Mississippi River...

Mississippi River Plots for June, 2011

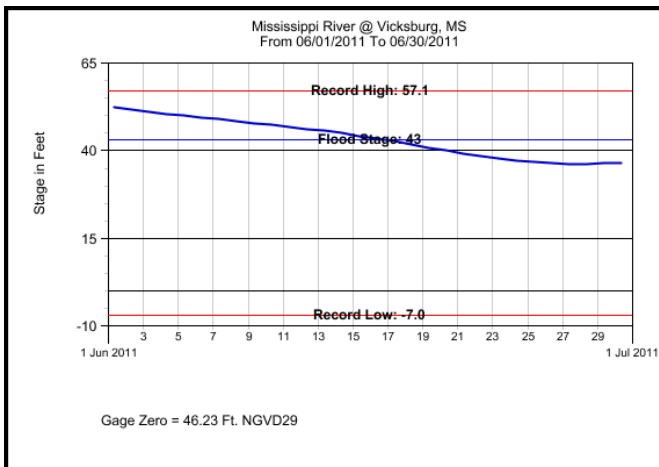
Plots Courtesy of the United States Army Corps of Engineers



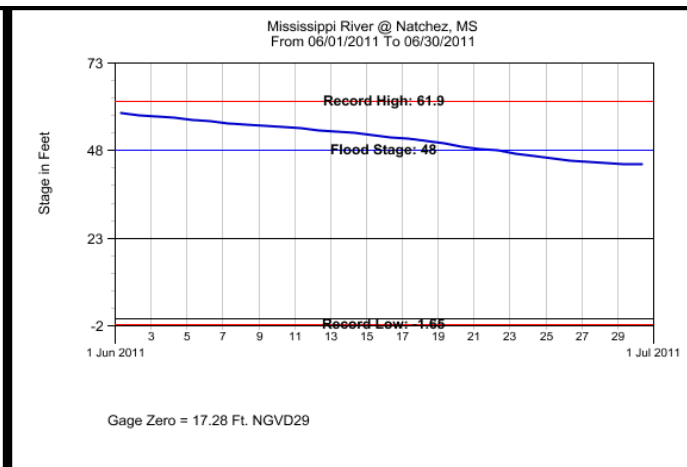
ARKANSAS CITY, MS



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	44.17	06/01/11	26.83	06/23/11
Greenville, MS	48	56.25	06/01/11	38.60	06/23/11
Vicksburg, MS	43	52.46	06/01/11	36.20	06/28/11
Natchez, MS	48	58.77	06/01/11	44.00	06/30/11

Total Flood Warning products issued: 0
Total Flood Statement products issued: 64
Total Flood Advisories MS River : 0
Daily Rainfall Products (RRA'S) issued: 30
Daily River Forecast Products (RVS'S) issued: 30
Daily River Stage products (RVA'S) issued: 30

Marty V. Pope

Service Hydrologist

&

Latrice Maxie

Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District